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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,285	04/17/2002	Stefan Schuerg	R.38598	9597
2119	7590	12/01/2003	EXAMINER	
RONALD E. GREIGG GREIGG & GREIGG P.L.L.C. 1423 POWHATAN STREET, UNIT ONE ALEXANDRIA, VA 22314			FRISTOE JR, JOHN K	
			ART UNIT	PAPER NUMBER
			3754	
			DATE MAILED: 12/01/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,285

Applicant(s)

SCHUERG ET AL.

Examiner

John K. Fristoe Jr.

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9, 10, 13, 14 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 11, 12, 15, 16 and 20-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9, 10, 14, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by German Pat. No. DE 19744235 A1 (Gurich et al.). Gurich et al. disclose a valve for controlling fluids having a piezoelectric actuator (17), an actuator bore (21), a hydraulic booster (20), a bellows (18) connected to the piezoelectric actuator (connected at 19) and the actuator bore (connected at 26), a sleeve-like extension (26), that is solidly connected to the actuator bore via a press fit (fig. 2) of a retaining body (1), and the bellows (18) has three undulations (fig. 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat No. 4,858,439 (Sawada et al.) in view of German Pat. No. DE 19744235 A1 (Gurich et al.). Sawada et al. disclose a valve for controlling fluids having a piezoelectric actuator (23), an actuator bore (housing around the actuator), a hydraulic booster (10), a bellows (11) solidly connected to the piezoelectric actuator, and a sleeve-like extension (11a) but lacks having the bellows solidly connected to the actuator bore. Gurich et al. teach solidly connecting the bellows (18) to the actuator bore. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the valve actuator having a bellows seal connected to the actuator bore via an intermediate housing by connecting the bellows directly to the actuator bore as taught by Gurich et al. in order to maintain a fluid tight seal that would not allow any fluid to interact with the piezoelectric actuator which might render the actuator inoperable.

6. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Pat. No. DE 19744235 A1 (Gurich et al.) in view of U.S. Pat. No. 3,651,657 (Bottum). Gurich et al. disclose the valve actuator described above but lacks having the bellows seal being made of metal. Bottum teaches that a bellows may be made of either plastic or metal (col. 5, lines 2-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the valve actuator having a plastic bellows of Gurich et al. by replacing the plastic bellows with a metal bellows as taught by Bottum in order for the bellows seal to resist being disintegrated by the internal fluid of the valve and for the bellows seal to be able to last longer within the valve.

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Allowable Subject Matter

7. Claims 11, 12, 15, 16, 20, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

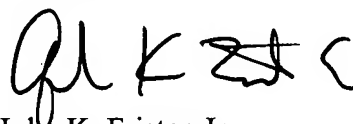
U.S. Pat. No. 4,378,774 (Kato) discloses a fuel injector actuator having a hydraulic booster having two offset pistons.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (703) 308-1437.

The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Louis G. Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



John K. Fristoe Jr.
Examiner
Art Unit 3754

JKF



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
11/25/03